In vivo evaluation of paclitaxel-loaded lipid nanocapsules after intravenous and oral administration on resistant tumor.

Titre	In vivo evaluation of paclitaxel-loaded lipid nanocapsules after intravenous and oral administration on resistant tumor.
Type de publication	Article de revue
Auteur	Groo, Anne-Claire [1], Bossière, M [2], Trichard, L [3], Legras, Pierre [4], Benoît, Jean-Pierre [5], Lagarce, Frédéric [6]
Pays	Royaume-Uni
Editeur	Future Medicine
Ville	London
Type	Article scientifique dans une revue à comité de lecture
Année	2015
Langue	Anglais
Date	03/2015
Numéro	4
Pagination	589-601
Volume	10
Titre de la revue	Nanomedicine
ISSN	1748-6963
Résumé en anglais	**UNLABELLED:** Aim & methods: The aim of the present work was to encapsulate paclitaxel (Ptx) in various lipid nanocapsules (LNCs) formulations and then to compare their pharmacokinetics and efficacy on a subcutaneous isograft model in rats. **RESULTS:** Three different Ptx formulations were obtained. Drug payloads ranged from 1.32 to 3.62 mg Ptx/g of formulation. After oral administration the area under concentration-time curve was higher ($p < 0.05$) if Ptx was encapsulated, (1,2 Distearoyl-sn-glycero-3-phosphoethanolamine-N-[amino(PEG)] (DSPE-PEG-NH2)) LNCs displaying the highest area under concentration-time curve ($p < 0.05$). Efficacy was better than control for standard LNCs after oral administration ($p < 0.05$) and for (DSPE-PEG-NH2) LNCs after intravenous administration. Despite good absorption, (DSPE-PEG-NH2) LNCs failed to remain efficient after oral route. **CONCLUSION:** This study highlights the importance of efficacy studies paired to pharmacokinetic studies for nanomedicines.
URL de la notice	http://okina.univ-angers.fr/publications/ua8774 [7]
DOI	10.2217/nnm.14.124 [8]
Lien vers le document	http://dx.doi.org/10.2217/nnm.14.124 [8]
Autre titre	Nanomedicine

Identifiant (ID) PubMed	25723092 [9]

Liens
[1] http://okina.univ-angers.fr/publications?f[author]=24559
[2] http://okina.univ-angers.fr/publications?f[author]=10572
[3] http://okina.univ-angers.fr/publications?f[author]=10573
[4] http://okina.univ-angers.fr/pierre.legras/publications
[5] http://okina.univ-angers.fr/j.benoit/publications
[6] http://okina.univ-angers.fr/frederic.lagarce/publications
[7] http://okina.univ-angers.fr/publications/ua8774
[8] http://dx.doi.org/10.2217/nnm.14.124
[9] http://www.ncbi.nlm.nih.gov/pubmed/25723092?dopt=Abstract